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Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**DECLARATION FOR UTILITY OR  
DESIGN  
PATENT APPLICATION  
(37 CFR 1.63)**

Declaration Submitted with Initial Filing       Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)

Attorney Docket Number	1870-00400
First Named Inventor	MARIANI, Roberto
<b>COMPLETE IF KNOWN</b>	
Application Number	/ Not Yet Assigned
Filing Date	Concurrently Herewith
Group Art Unit	UNKNOWN
Examiner Name	UNKNOWN

As a below named Inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**Face Direction Estimation Using a Single Gray-Level Image**

the specification of which

*(Title of the Invention)*

is attached hereto

OR

was filed on (MM/DD/YYYY) [ ] as United States Application Number or PCT International

Application Number [ ] and was amended on (MM/DD/YYYY) [ ] (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?
9905429-8	SINGAPORE	03/11/1999 11/3/99	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>

Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

I hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date (MM/DD/YYYY)	<input type="checkbox"/> Additional provisional application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.
[ ]	[ ]	<input type="checkbox"/>

[Page 1 of 2]

Burden Hour Statement: This form is estimated to take 0.4 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

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Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.**DECLARATION — Utility or Design Patent Application**

I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application or PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number <i>(if applicable)</i>

Additional U.S. or PCT International application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

As a named inventor, I hereby appoint the following registered practitioner(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Customer Number  Place Customer Number Bar Code Label here

**OR**

Registered practitioner(s) name/registration number listed below

Name	Registration Number	Name	Registration Number

Additional registered practitioner(s) named on supplemental Registered Practitioner Information sheet PTO/SB/02C attached hereto.

Direct all correspondence to:  Customer Number or Bar Code Label  OR  Correspondence address below

Name			
Address			
Address			
City	State	ZIP	
Country	Telephone	Fax	

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name of Sole or First Inventor:		<input type="checkbox"/> A petition has been filed for this unsigned inventor				
Given Name (first and middle if any)			Family Name or Surname			
Roberto			MARIANI			
Inventor's Signature					Date	23/2/20
Residence: City	Singapore	State	Country	Singapore	Citizenship	France
Post Office Address	2A Rainbow Mansions, One Tree Hill #01-05, 268847 SINGAPORE					
Post Office Address						
City	Singapore	State	ZIP	248670	Country	Singapore

Additional inventors are being named on the 1 supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto

Please type a plus sign (+) inside this box →

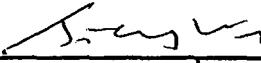
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## DECLARATION

### ADDITIONAL INVENTOR(S) Supplemental Sheet Page 1 of 1

Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor					
Given Name (first and middle [if any])		Family Name or Surname					
Jiankang		WU					
Inventor's Signature						Date	28/2/00
Residence: City	Singapore	State		Country	Singapore	Citizenship	China
Post Office Address	Blk 51, Teban Gardens Road, #06-565						
Post Office Address							
City	Singapore	State		ZIP	600051	Country	Singapore
Name of Additional Joint Inventor, if any:	<input type="checkbox"/> A petition has been filed for this unsigned inventor						
Given Name (first and middle [if any])		Family Name or Surname					
Inventor's Signature						Date	
Residence: City		State		Country		Citizenship	
Post Office Address							
Post Office Address							
City		State		ZIP		Country	
Name of Additional Joint Inventor, if any:	<input type="checkbox"/> A petition has been filed for this unsigned inventor						
Given Name (first and middle [if any])		Family Name or Surname					
Inventor's Signature						Date	
Residence: City		State		Country		Citizenship	
Post Office Address							
Post Office Address							
City		State		ZIP		Country	

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**SUPPLEMENTAL DECLARATION**

**SOLE/Joint INVENTOR  
ORIGINAL/SUBSTITUTE/CIP**

As a below named inventor, I hereby declare that: my residence, post office address, and citizenship are as stated below next to my name. I believe I am the original, first, and sole inventor (if only one name is listed below) or a joint inventor (if plural inventors are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: "**FACE DIRECTION ESTIMATION USING A SINGLE GRAY-LEVEL IMAGE**" as described in the specification of patent application Serial No. 09/528,279, filed March 17, 2000.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above; that I do not know and do not believe the same was ever known or used in the United States of America before my or our invention thereof, or patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application; that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representative or assigns more than twelve months prior to this application; and that I acknowledge the duty to disclose information of which I am aware which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations § 1.56(a). Such information is material when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant has taken or may take in:
  - (I) opposing an argument of unpatentability relied on by the Office, or
  - (II) asserting an argument of patentability.

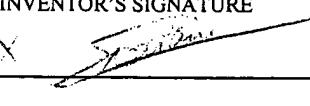
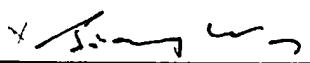
I hereby claim foreign priority benefits under Title 35, United States Code § 119 of any foreign application(s) for patent or inventor's certificates listed below and have also identified below any foreign application(s) having a filing date before that of the application(s) on which priority is claimed:

COUNTRY	APPLICATION NUMBER	DATE OF FILING	PRIORITY CLAIMED UNDER 35 USC 119
SINGAPORE	9905429-8	November 3, 1999	YES

I hereby claim the benefit under Title 35 United States Code § 120 and/or § 119(e) of any United States application(s) listed below and, insofar as any subject matter of any claim of this application is not disclosed in the prior United States Application, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations § 1.56(a) which occurred between the filing date of the prior application and the national PCT International filing date of this application:

N/A

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

FULL NAME OF SOLE OR FIRST INVENTOR <b>Roberto MARIANI</b>	INVENTOR'S SIGNATURE 	DATE <i>X May, 30<sup>th</sup>, 2000</i>
RESIDENCE <b>Blk 56, Farrer Road, Spanish Village, #01-65, Singapore, 268847</b>	CITIZENSHIP <b>FRANCE</b>	
POST OFFICE ADDRESS <b>SAME AS ABOVE</b>		
FULL NAME OF SECOND JOINT INVENTOR <b>Jiankang WU</b>	INVENTOR'S SIGNATURE 	DATE <i>X May, 30<sup>th</sup>, 2000</i>
RESIDENCE <b>Blk 51, Teban Gardens Road, #06-565, Singapore, 600051</b>	CITIZENSHIP <b>CHINA</b>	
POST OFFICE ADDRESS <b>SAME AS ABOVE</b>		

1870-00402



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JONATHAN M. HARRIS  
P.O. BOX 3267  
HOUSTON, TEXAS 77253-3267



\*101302641A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 03/17/2000

REEL/FRAME: 010637/0245  
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNEE'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNEE:  
MARIANI, ROBERTO

DOC DATE: 02/28/2000

ASSIGNEE:  
WU, JIANKANG

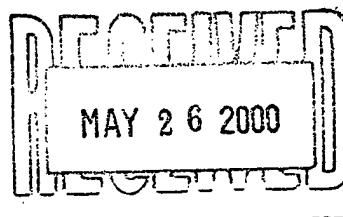
DOC DATE: 02/28/2000

ASSIGNEE:  
KENT RIDGE DIGITAL LABS  
21 HENG MUI KENG TERRACE  
SINGAPORE 119613, SINGAPORE

SERIAL NUMBER: 09528279  
PATENT NUMBER:

FILING DATE:  
ISSUE DATE:

MARY BENTON, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS



Practitioner's Docket No.

1870-00400**PATENT**

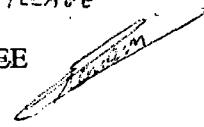
- For:  U.S. and/or  Foreign Rights  
 For:  U.S. Application or  
 For:  U.S. Provisional Application  
 For:  U.S. Patent  
 For:  PCT Application  
 By:  Multiple Inventors

**ASSIGNMENT OF INVENTION (MULTIPLE INVENTORS)**

In consideration of the payment by ASSIGNEE to ASSIGNOR of the sum of One Dollar (\$1.00), the receipt of which is hereby acknowledged, and for other good and valuable consideration,

**ASSIGNORS (Inventors):**

BLK 56, FARRER ROAD, SINGAPORE VILLAGE  
 #01-05, SINGAPORE 268847  
 2A RAINBOW MANSION, ONE TREE  
 HILL, SINGAPORE 248670,  
 REPUBLIC OF SINGAPORE


**ROBERTO MARIANI***(type or print name of inventors)***FRANCE**

Address

Nationality

BLK 51, TEBAN GARDENS ROAD,  
 #06-565, SINGAPORE 600051,  
 REPUBLIC OF SINGAPORE

**JIANKANG WU***(type or print name of inventors)***CHINA**

Address

Nationality

*(type or print name of inventors)*

Address

Nationality

hereby sells, assigns and transfers to  
ASSIGNEE:

21 HENG MUI KENG TERRACE,  
SINGAPORE 119613, REPUBLIC OF  
SINGAPORE

**KENT RIDGE DIGITAL LABS**  
*(type or print name of ASSIGNEE)*

Address

**SINGAPORE**

Nationality

and the successors, assigns and legal representatives of the ASSIGNEE

*(complete one of the following)*

- [ X] the entire right, title and interest  
[ ] an undivided \_\_\_\_\_ percent ( \_\_\_\_\_ %) interest

for the United States and its territorial possessions

*(check the following box, if foreign rights are also to be assigned)*

[ X] and in all foreign countries, including all rights to claim priority,  
in and to any and all improvements which are disclosed in the invention entitled:

**FACE DIRECTION ESTIMATION USING A SINGLE GRAY LEVEL IMAGE**

Name of inventor(s) **ROBERTO MARIANI; JIANKANG WU**

*(check and complete (a), (b), (c), (d), (e), (f) or (g))*

and which is found in (37 C.F.R. § 3.21)

- (a) [X] U.S. patent application executed on even date herewith  
(b) [ ] U.S. patent application executed on \_\_\_\_\_  
(c) [ ] U.S. provisional application naming the above inventor(s) for the  
above entitled invention.  
[ ] Express mail label no.: \_\_\_\_\_  
Mailed: \_\_\_\_\_  
(d) [ ] To comply with 37 C.F.R. 3.21 for recordal of this assignment, I an  
ASSIGNOR signing below, hereby authorize and request my  
attorney to insert below the filing date and application number when  
they become known.
- (d) [ ] U.S. application no. \_\_\_\_\_  
filed on \_\_\_\_\_  
(e) [ ] International application no. PCT/ \_\_\_\_\_  
(f) [ ] U.S. patent no. \_\_\_\_\_ issued \_\_\_\_\_  
[ ] A change of address to which correspondence is to be sent regarding  
patent maintenance fees is being sent separately.

*(also check (g), if foreign application(s) is also being assigned)*

- (g) [ X] and any legal equivalent thereof in a foreign country, including the  
right to claim priority

and, in and to, all Letters Patent to be obtained for said invention by the above application or any continuation, division, renewal, or substitute thereof, and as to letters patent any reissue or re-examination thereof

ASSIGNOR hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

ASSIGNOR further covenants that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, We have hereunto set hand and seal this (X) 28/1/2000  
Date of signing

ROBERTO MARIANI

(type name of Inventor)

(X)

Signature of INVENTOR

JIANKANG WU

(type name of Inventor)

(X)

Signature of INVENTOR

***WARNING: The date of signing must be the same as the date of execution of the application, if item (a) was checked above.***

Notarization or Legalization Page Added.

***NOTE No witnessing, notarization or legalization is necessary. If the assignment is notarized or legalized then it will only be prima facie evidence of execution. 35 USC 261. Use next page if notarization is desired***